DOCUMENT RESUME

ED 426 986 SP 038 284


AUTHOR Abdal-Haqq, Ismat


TITLE Constructivism in Teacher Education: Considerations for Those Who Would Link Practice to Theory. ERIC Digest.
INSTITUTION ERIC Clearinghouse on Teaching and Teacher Education, Washington, DC.
SPONS AGENCY Office of Educational Research and Improvement (ED), Washington, DC.
REPORT NO EDO-SP-97-8
PUB DATE 1998-12-00
NOTE 4p.
CONTRACT RR93002015
PUB TYPE ERIC Publications (071) -- ERIC Digests in Full Text (073)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Cognitive Development; *Constructivism (Learning); Elementary Secondary Education; Epistemology; Higher Education; Inservice Teacher Education; Preservice Teacher Education; *Theory Practice Relationship
IDENTIFIERS ERIC Digests; Social Constructivism



ABSTRACT

Constructivism has received considerable attention in educational scholarship, practitioner preparation, and policy formation. This Digest identifies major forms of constructivism, considering issues and challenges that surface when implementing constructivist approaches to preservice and inservice teacher education. Constructivism is an epistemology, a learning or meaning-making theory, that offers an explanation of the nature of knowledge and how humans learn. It maintains that individuals create or construct their own new understandings or knowledge through the interaction of what they already know and believe and the ideas, events, and activities with which they have contact. Constructivist approaches are regarded as producing greater internalization and deeper understanding than traditional methods. Overall, two broad interpretations can be found among contemporary educators: psychological constructivism (articulated by Piaget) and social constructivism (associated with Vygotsky). Constructivism is a theory of learning, not a theory of teaching. The overarching challenge constructivism presents to teachers and teacher educators is translating a learning theory into a theory of teaching, which raises questions about what teachers need to know and be able to do. Educators also face the pitfall of regarding constructivism as the only viable theoretical framework for teaching and learning. Prospective teachers should be exposed to varying perspectives and given opportunities to develop the discretion needed to choose most appropriately and the skills to implement their choices. (Contains 14 references.) (SM)



**********
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
**********

ERIC DECEMBER 1998

# DIGEST

97/8

## Constructivism in Teacher Education: Considerations for Those Who Would Link Practice to Theory

Ismat Abdal-Haqq

ED 426 986

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

- This document has been reproduced as received from the person or organization originating it.
- Minor changes have been made to improve reproduction quality.
- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

SP038284

ERIC DIGEST
DECEMBER 1998
97/8

# Constructivism in Teacher Education: Considerations for Those Who Would Link Practice to Theory

Ismat Abdal-Haqq

In recent years, constructivism has received considerable attention in education scholarship, practitioner preparation, and policy formation (MacKinnon & Scarff-Seatter, 1997; Richardson, 1997; Teets & Starnes, 1996). It has been heralded as a more natural, relevant, productive, and empowering framework for instructing both P-12 and teacher education students (Cannella & Reiff, 1994). This Digest identifies major forms of constructivism and considers issues and challenges that surface when implementing constructivist approaches to preservice and inservice teacher education.

**What Is Constructivism?**

Constructivism is an epistemology, a learning or meaning-making theory, that offers an explanation of the nature of knowledge and how human beings learn. It maintains that individuals create or construct their own new understandings or knowledge through the interaction of what they already know and believe and the ideas, events, and activities with which they come in contact (Cannella & Reiff, 1994; Richardson, 1997). Knowledge is acquired through involvement with content instead of imitation or repetition (Kroll & LaBoskey, 1996). Learning activities in constructivist settings are characterized by active engagement, inquiry, problem solving, and collaboration with others. Rather than a dispenser of knowledge, the teacher is a guide, facilitator, and co-explorer who encourages learners to question, challenge, and formulate their own ideas, opinions, and conclusions. "Correct" answers and single interpretations are deemphasized.

As an approach to teaching, constructivism may be examined as much for what it is **not** as for what it is. It challenges what Oldfather, Bonds, and Bray (1994) characterize as the default mode in education—an empiricist/reductionist approach to teaching and learning. They cite Freire who considers this approach to be a "banking" model—the teacher fills students with deposits of information considered by the teacher to be true knowledge, and the students store these deposits, intact, until needed. Cannella & Reiff (1994) label these traditional models didactic, memory-oriented transmission models. Constructivists generally maintain that when information is acquired through transmission models, it is not always well integrated with prior knowledge and is often accessed and articulated only for formal academic occasions such as exams (Richardson, 1997). Constructivist approaches, in contrast, are regarded as producing greater internalization and deeper understanding than traditional methods.

While there are commonly accepted attributes of constructivism, there are also different interpretations of it. Vadeboncoeur (1997) identifies three significant strands within these interpretations—Piagetian, sociocultural, and emancipatory constructivism—strands differentiated primarily by (1) the subject of study, (2) views about how cognitive forms develop, and (3) "the liberatory power of the pedagogical approaches derived" (p. 22). In general, two broad interpretations can be found among contemporary educators—psychological constructivism, most notably articulated by Piaget, and social constructivism, associated with Vygotsky. Two major issues shape these interpretations: (1) education for individual development versus education for social transformation and (2) the degree of influence that social context has on individual cognitive development (Richardson, 1997; Vadeboncoeur, 1997).

*Psychological Constructivism*

Psychological or Piagetian constructivists generally regard the purpose of education as educating the individual child in a fashion that supports the child's interests and needs; consequently, the child is the subject of study, and individual cognitive development is the emphasis. Learning is primarily an individualistic enterprise. This is a child-centered approach that seeks to identify, through scientific study, the natural path of cognitive development (Vadeboncoeur, 1997). This approach assumes that students come to classrooms with ideas, beliefs, and opinions that need to be altered or modified by a teacher who facilitates this alteration by devising tasks and questions that create dilemmas for students. Knowledge construction occurs as a result of working through these dilemmas. Characteristic instructional practices include "discovery learning" and hands-on activities, such as using manipulatives; student tasks that challenge existing concepts and thinking processes; and questioning techniques that probe students' beliefs and encourage examination and testing of those beliefs (Richardson, 1997).

To a large extent, this approach assumes that development is an ingrained, natural, biological process that is pretty much the same for all individuals, regardless of gender, class, race, or the social or cultural context in which learning and living take place (Vadeboncoeur, 1997). Internal development is the focus of the teaching environment, and the social and historical context, as well as issues of power, authority, and the place of formal knowledge in the learning environment are not emphasized (Richardson, 1997). It is essentially a decontextualized approach to learning and teaching. Critics of the psychological constructivist approach deprecate its lack of attention to "the influence of the classroom culture and the broader social context" (Vadeboncoeur, 1997), as well as disregard for power issues, particularly power issues related to knowledge production (Martin, 1994; Richardson, 1997; Vadeboncoeur, 1997).

*Social Constructivism*

Social or Vygotskian constructivism emphasizes education for social transformation and reflects a theory of human development that situates the individual within a sociocultural context. Individual development derives from social interactions within which cultural meanings are shared by the group and eventually internalized by the individual (Richardson, 1997). Individuals construct knowledge in transaction with the environment, and in the process both the individual and the environment are changed. The subject of study is the dialectical relationship between the individual and the social and cultural milieu.

Schools are the sociocultural settings where teaching and learning take place and where "cultural tools," such as reading, writing, mathematics, and certain modes of discourse are utilized (Richardson, 1997). This approach assumes that theory and practice do not develop in a vacuum; they are shaped by dominant cultural assumptions (Martin, 1994; O'Loughlin, 1995). Both formal knowledge, the subject of instruction, and the manner of its presentation are influenced by the historical and cultural environment that generated them. To accomplish the goals of social transformation and reconstruction, the context of education must be deconstructed, and the cultural assumptions, power relationships, and historical influences that undergird it must be exposed, critiqued, and, when necessary, altered (Myers, 1996). Variants of social constructivism include situated constructivism, social reconstructivism, sociocultural constructivism, sociohistorical constructivism, and emancipatory constructivism.

**Constructivist Frameworks in Teacher Education**

While it may inform and influence practice, constructivism is a theory of learning, not a theory of teaching (Wolffe & McMullen, 1996), and translating theory to practice is both difficult and imprecise (MacKinnon & Scarff-Seatter, 1997). However, education literature documents several large- and small-scale efforts to do so (DeJong & Grooms, 1996; Kaufman,

ERIC CLEARINGHOUSE ON TEACHING AND TEACHER EDUCATION
American Association of Colleges for Teacher Education
One Dupont Circle • Suite 610 • Washington, DC 20036-1186
(202) 293-2450 • (800) 822-9229 • http://www.ericsp.org

1996, Richardson, 1997). For example, as part of a statewide education reform initiative, University of Louisville faculty, supported by funding from the Kentucky Department of Education, developed 11 guiding principles and possible indicators of constructivist teaching (Fischetti, Dittmer, & Kyle, 1996). The venerable Foxfire Project devised 11 core practices that reflect the constructivist underpinnings of the Foxfire approach to teaching and professional development, which has evolved over a 30-year period (Teets & Starnes, 1996).

Constructivist teacher education generally reflects two major traditions—the developmental and social reconstructionist traditions (Canella & Reiff, 1994). Programs influenced by the developmental tradition attempt to teach students how to teach in a constructivist, generally Piagetian, manner. They are typically characterized by substantial direct instruction in theory and practice, often without complementary opportunities for inquiry, discovery, or self-examination. This approach can easily become overly prescriptive. If this occurs, the teacher educator models an approach to teaching that is essentially antithetical to the approach students are intended to employ in their future classrooms (Oldfather, Bonds, & Bray, 1994).

Programs influenced by social reconstructionist tradition attempt to help teacher education students deconstruct their own prior knowledge and attitudes, comprehend how these understandings evolved, explore the effects they have on actions and behavior, and consider alternate conceptions and premises that may be more serviceable in teaching. Critical analysis and structured reflection on formal course knowledge and everyday practical experience are incorporated.

Richardson (1997) identifies two factors that appear to affect the approach teachers and teacher educators take in forming constructivist settings—the extent to which the social is acknowledged as a critical factor in learning and individual cognitive development and the specific content, subject matter, or discipline. Some subjects, such as mathematics, are more "bounded" than others by rules, formulae, and procedures. They are more likely to be regarded by teachers as producing problems and tasks to which there are "correct" answers. Individual interpretations and construction of ideas and concepts are less likely to be encouraged by teachers than in subjects such as literature and writing.

## Challenges

The overarching challenge constructivism presents to teachers and teacher educators is the formidable task of translating a learning theory into a theory of teaching (MacKinnon & Scarff-Seatter, 1997), which in turn raises questions about what teachers need to know and be able to do. For teacher educators, among other tasks, this involves balancing the need to acknowledge the different discipline-specific requirements of teaching with the need to model constructivist methods in teacher education courses and practicums. Richardson also (1997) notes the limits of a perspective on teaching that values students' understandings at the expense of "right" answers. Student knowledge becomes idiosyncratic; 30 different students may arrive at 30 different understandings or interpretations of a concept, all of which are not equally appropriate. Inappropriately applied, constructivist approaches may lead to the "abandonment" style of teaching (MacKinnon & Scarff-Seatter, 1997).

Several authors cite the importance of teacher educators' modeling constructivist approaches that engage students in interdisciplinary exploration, collaborative activity, and field-based opportunities for experiential learning, reflection, and self-examination (Kaufman, 1996; Kroll & LaBosky, 1996) if future teachers are to be able to employ these strategies in schools.

To derive culturally relevant and socially just pedagogy and practice from constructivist epistemologies, Martin (1994) and Vadeboncoeur (1997) urge teacher educators to deconstruct and scrutinize cultural assumptions that underlie various interpretations of constructivism to expose how social beliefs have influenced the development of theory and practices. Without such scrutiny, societal inequities and historical forms of oppression may be perpetuated in supposedly constructivist classrooms, and the very constraints on individual development constructivists seek to remove or ameliorate will be reinforced.

A final challenge faced by educators is the pitfall of regarding constructivism as the only viable theoretical framework for teaching and learning. It is one way of thinking about how knowledge and understanding are formed, but it is not the only way. Nor are various interpretations of constructivism necessarily incompatible with one another (MacKinnon & Scarff-Seatter, 1997; Oldfather, Bonds, & Bray, 1994). Prospective teachers should be exposed to varying perspectives and given opportunities to develop the discretion needed to choose most appropriately and the skills to implement their choices.

## References


References identified with an EJ or ED number have been abstracted and are in the ERIC database. Journal articles (EJ) should be available at most research libraries; most documents (ED) are available in microfiche collections at more than 900 locations. Documents can also be ordered through the ERIC Document Reproduction Service (800-443-ERIC).

Carnella, G. S., & Reiff, J. C. (1994). Individual constructivist teacher education: Teachers as empowered learners. *Teacher Education Quarterly, 21*(3), 27–38. EJ498429

Defino, E., & Groomes, F. (1996). A constructivist teacher education program that incorporates community service to prepare students to work with children living in poverty. *Action in Teacher Education, 18*(2), 86–95. EJ536849

Fischetti, J., Dittmer, A., & Kyle, D. W. (1996). Shifting paradigms: Emerging issues for educational policy and practice. *Teacher Educator, 31*(3), 189–201. EJ525345

Kaufman, D. (1996). Constructivist-based experiential learning in teacher education. *Action in Teacher Education, 18*(2), 40–49. EJ536845

Kroll, L. R., & LaBosky, V. K. (1996). Practicing what we preach: Constructivism in a teacher education program. *Action in Teacher Education, 18*(2), 63–72. EJ536847

MacKinnon, A., & Scarff-Seatter, C. (1997). Constructivism: Contradictions and confusion in teacher education. In V. Richardson (Ed.), *Constructivist teacher education: Building new understandings* (pp. 38–55). Washington, DC: Falmer Press.

Martin, R. J. (1994). Multicultural social reconstructionist education: Design for diversity in teacher education. *Teacher Education Quarterly, 21*(3), 77–89. EJ492104

Myers, C. B. (1996, April). *Beyond PDSs: Schools as professional learning communities: A proposal based on an analysis of PDS efforts of the 1990's.* Paper presented at the annual meeting of the American Educational Research Association, New York. ED400227

Oldfather, P., Bonds, S., & Bray, T. (1994). Drawing the circle: Collaborative mind mapping as a process for developing a constructivist teacher education program. *Teacher Education Quarterly, 21*(3), 5–15. EJ492137

O'Loughlin, M. (1995). Daring the imagination: Unlocking voices of dissent and possibility in teaching. *Theory into Practice, 34*(2), 107–116. EJ512860

Richardson, V. (1997). Constructivist teaching and teacher education: Theory and practice. In V. Richardson (Ed.), *Constructivist teacher education: Building new understandings* (pp. 3–14). Washington, DC: Falmer Press.

Teets, S. T., & Starnes, B. A. (1996). Foxfire: Constructivism for teachers and learners. *Action in Teacher Education, 18*(2), 31–39. EJ536848

Vadeboncoeur, J. (1997). Child development and the purpose of education: A historical context for constructivism in teacher education. In V. Richardson (Ed.), *Constructivist teacher education: Building new understandings* (pp. 15–37). Washington, DC: Falmer Press.

Wolffe, R. J., & McMullen, D. W. (1996). The constructivist connection: Linking theory, best practice, and technology. *Journal of Computing in Teacher Education, 12*(2), 25–28. EJ526775



**ERIC Clearinghouse on Teaching and Teacher Education**
**1-800-822-9229 http://www.ericsp.org query@aacte.org**

Mary E. Dilworth, Director
Judy A. Beck, Associate Director
Ismat Abdal-Haqq, ERIC Clearinghouse (Author)



**This Digest is in the public domain and may be reproduced.**



**OERI** This publication was prepared with funding from the Office of Educational Research and Improvement, U. S. Department of Education, under contract number RR93002015. The opinions expressed in this report do not necessarily reflect the positions or policies of OERI or the Department.

**ERIC** Educational Resources Information Center (ERIC) is a nationwide information system initiated in 1966. It is funded by the U. S. Department of Education. ERIC is the largest and most frequently used education database in the world.